Mechanical Working Instructions

Applicable for T28

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1 Disassembly

1.1 Process tools

- Front-disassembly-tools.
- Torque screwdriver, torx no.6 pre-set to 33 Ncm.

1.2 Instructions

NOTE! Keep all contact-surfaces/display clean of skin oil. Use gloves!

1. Remove the battery.
2. Hold the phone upside down. Open the flip until it points 90° outwards and press your thumb on the hinge (fig1.1).
3. Remove the flip by placing your thumb on the outside and your fingers on the inside and press it off the hinge (fig1.2).
4. Carefully pull out the other hinge.

   NOTE! Be careful, the connector-pins will easily stick into the mic. cable.
5. Remove the antenna by slightly moving it side by side at the same time as pulling it out from the phone (fig1.3).

   NOTE! Don't break, the antenna holder/connector may be damaged.
6. Hold the phone with the frame towards you. Place one of the front-disassembly tools in the small slot between the front and the frame, in the middle of one side (fig1.4).

   NOTE! Be carefully, don't slide with the tools, the frame or the front will easily be scratched.
7. Without breaking, bend the tool upwards while pressing/forcing it all the way under the front cover until the green handle comes into contact with the frame and leave it there (fig1.5).

   NOTE! You are not allowed to break with the tool or slide with it, only push it under the front
8. Repeat previous step with another tool on the opposite side (fig1.6).

   NOTE! The green handles on the tools must come into contact with the frame, otherwise the front cover will not come loose in next step!
9. On the top, place the last tool in the small slot between front and frame. Bend it towards you (fig1.7).
10. Carefully pull off the front cover by lifting and turning it around the system connector (fig1.8).

    NOTE! Carefully so you don't damage the snap holder in the front or stretch the mic-cable.
11. Disconnect the mic-cable from the board (fig1.9).
12. Remove the four display assembly screws (fig1.10).

13. Remove the display assembly by lifting it upwards.
14. Remove the three board screws and place the board on an ESD-protected surface (fig1.11).

Fig 1.1

Fig 1.2

Fig 1.3

Fig 1.4

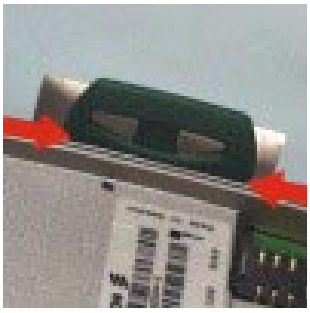


Fig 1.5

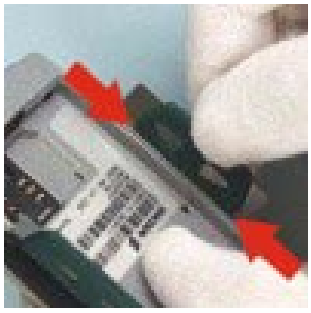


Fig 1.6

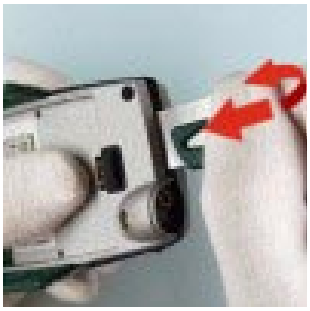


Fig 1.7

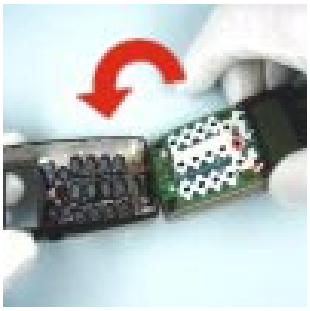


Fig 1.8

Fig 1.9

Fig 1.10

Fig 1.11

2 Reassembly

2.1 Process tools

- Torque screwdriver, torx no.6 pre-set to 33 Ncm.
- Tweezers.

2.2 Instructions

NOTE! Keep all contact-surfaces/display clean of skin oil. Use gloves!

1. Control every contact-surfaces on the board is clean and not damaged.
2. Place the board on the frame and control that the vibrator connector board is correctly mounted with the cables pointed downward (fig3.1).
3. Mount a short screw over the vibrator connector and tighten with the torque screwdriver (fig3.2).
4. Mount one long screw on the left side (washer) of the system-connector and one short screw of the other side. Tighten them with the torque screwdriver (fig3.3).
5. Control there is no dust/dirt on the El-lamp or on the backside of the display.
6. Place the display assembly on the board.

   NOTE! Always exchange the elastomeric-connector.
7. Mount two long screws beside the loudspeaker and tighten them with the torque screwdriver (fig3.4).
8. Mount two short screws in the lower corners of the carrier and tighten them with the torque screwdriver (fig3.5).
9. Make a visual control there are no fissures in the front cover and its snapholders.
10. Rotate the mic-cable contact inside the front until the cables are pointing downwards and hold still with your thumb. Fit in the connector-pins and guiding pin in the front with the flip wide open. Press your thumb on the hinge (fig3.6).
11. Place your left thumb on the inside of the flip and your fingers on the outside and press it on in the wide-open position (fig3.7).

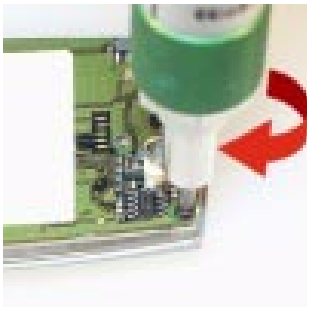
    NOTE! You can use a screwdriver to push in the plunger.
12. Close the flip and check the contact between the mic-cable and the flip is properly inserted all the way in and with the cables pointed upward (fig3.8).
13. Mount the mic-cable (still mounted in the front cover) on the board with the cables pointed downwards (red cable to the right) (fig3.9).

    NOTE! Carefully so you don’t stretch the mic-cable.
14. Control there is no dust/dirt on the display or on the inside of the window.
15. Mount the phone by first pushing the frame into the top of the front (fig3.10).

    NOTE! Make sure that the volume button is in its lower position.
16. Control that the mic-cable is into the cavity between the hinge and the spring.

17. Press the phone together and control there is no gap between front and frame.
18. Push the volume button up and down to secure it's snapped onto the volume-switch (fig3.11).
19. Mount the antenna and the battery

Fig 3.1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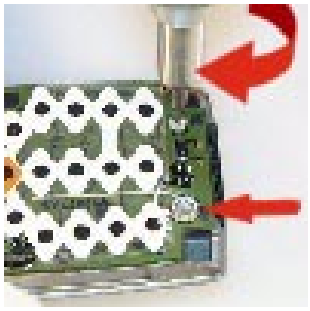
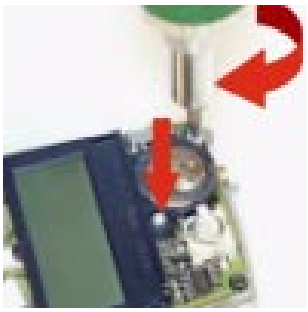


Fig 3.3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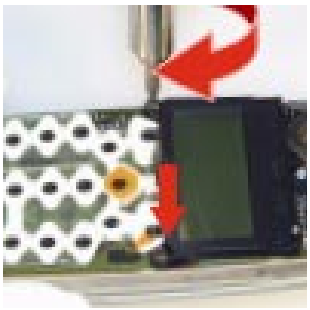


Fig 3.5

Fig 3.6

Fig 3.7

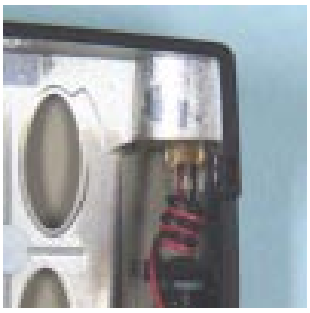


Fig 3.8

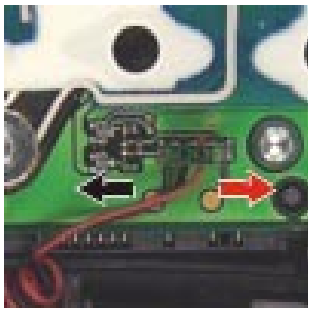


Fig 3.9

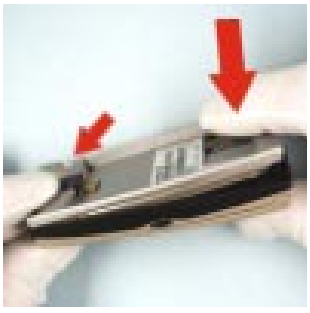


Fig 3.10

Fig 3.11

3 Replacement of Mechanical Parts

3.1 Flip

3.1.1 Process tools

- Cutting pliers.

3.1.2 Instructions

- Dismount the flip as described in *1 Disassembly* (*page 2*), step 1-11.

NOTE! If the flip will not be reused, simply cut off the right hinge with a cutting pliers.

1. Take a new flip.

- Mount the flip as described in *2 Reassembly* (*page 4*), step 9-19.

3.2 Volume button

3.2.1 Instructions

- No *Disassembly* or *Reassembly*.

1. Remove the volume button by pressing in your nail between the button and the front and pull carefully outwards (fig2.1).

   NOTE! Be careful, not to damage the front and control that no snapholders comes loose and stays inside the phone.

2. Take a new volume button.
3. Mount the volume button in the lower edge in the front cover with the lower snap-holders first (fig2.2).

   NOTE! The triangle arrow inside the button will point upward.

4. Push the volume button up and down to secure it's snapped onto the volume switch (fig2.3).

Fig 2.1

Fig 2.2

Fig 2.3

3.3 Front cover

3.3.1 Process tools

- Tweezers.

3.3.2 Instructions

- Dismount the phone as described in *1 Disassembly* (*page 2*), step 1-11.

1. Remove the mic-cable from the front cover by turning it -30° and pulling it out (fig2.1).
2. Remove the keyboard from the front cover.
3. Take a new front cover and mount the keyboard.
4. Mount the mic-cable with a tweezers into the bayonet in the front cover with the cables pointed upwards.
5. Remove the protections gasket inside the window.

- Mount the phone as described in *2 Reassembly* (*page 4*), step 9-19.

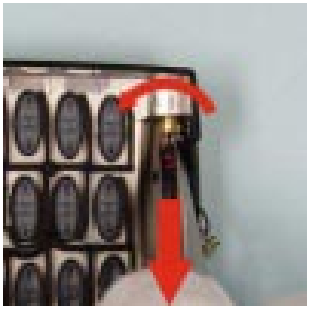


Fig 2.1

3.4 Mic-cable

3.4.1 Process tools

- Tweezers

3.4.2 Instructions

- Dismount the phone as described in *1 Disassembly* (*page 2*), step 1-11.

1. Remove the mic-cable from the front cover by turning it -30° and pulling it out (fig2.1).
2. Mount a new mic-cable with a tweezers into the bayonet in the front cover with the cables pointed upwards.

- Mount the phone as described in *2 Reassembly* (*page 4*), step 9-19.

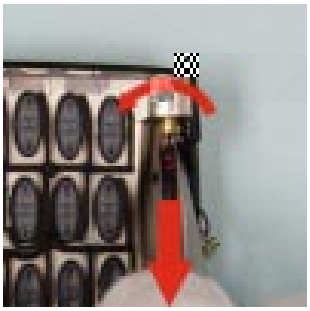


Fig 2.1

3.5 Buzzer gasket

3.5.1 Process tools

- Tweezers.

3.5.2 Instructions

- Dismount the phone as described in *1 Disassembly* (*page 2*), step 1 and 5-11.

1. Remove the gasket from the front cover with a tweezers (fig2.1).
2. Take a new buzzer gasket.
3. Remove the protection tape and mount the gasket inside the front cover.

   NOTE! Check that the adhesive part on the gasket does not cover the sound channel.

- Mount the phone as described in *2 Reassembly* (*page 4*), step 9 and 13-19.

Fig 2.1

3.6 Keyboard

3.6.1 Instructions

- Dismount the phone as described in *1 Disassembly* (*page 2*), step 1 and 5-10.

1. Replace the old keyboard with a new keyboard.

- Mount the phone as described in *2 Reassembly* (*page 4*), step 9 and 13-19.

3.7 Display assembly

3.7.1 Process tools

- Tweezers.

3.7.2 Instructions

- Dismount the phone as described in *1 Disassembly* (*page 2*), step 1 and 5-13.

WARNING! Different kind of LCD's and they are not compatible. Compare the article number on the old LCD (under the elastomeric holder or in the lower part) with the article number on the new display assembly cartoon (within parenthesis).

1. Press the loudspeaker through the hole in the old carrier.

NOTE! Do not touch the display or contact surface with your fingers, use gloves!

2. Remove the elastomeric-connector holder from the old carrier by lifting it upwards.
3. Take a new display assembly and control it's within same brand as the old one.
4. Take a new elastomeric connector and mount it in the holder inside the carrier. Press the elastomeric connector into the hole with your finger (fig2.1).

   NOTE! Do not touch the elastomeric connector with your hands, use gloves!
5. Mount a new gasket carefully onto the carrier.
6. Mount the loudspeaker in the cavity and press a few seconds without pressing on the LCD or the gasket (fig2.2).

- Mount the phone as described in *2 Reassembly* (*page 4*), step 5-9 and 13-19

Fig 2.1

Fig 2.2

3.8 Loudspeaker

3.8.1 Process tools

- Tweezers.

3.8.2 Instructions

- Dismount the phone as described in *1 Disassembly* (*page 2*), step 1 and 5-13.

1. Press the loudspeaker through the hole in the carrier (fig2.1).

   NOTE! Do not touch the display or contact surface with your fingers, use gloves!
2. Remove the old loudspeaker gasket carefully.
3. Mount a new gasket carefully onto the carrier (fig2.2).
4. Mount a new loudspeaker in the cavity and press a few seconds without pressing on the LCD or on the gasket (fig2.3).

   NOTE! Always exchange the elastomeric-connector.
5. Mount a new loudspeaker support beside the hole onto the loudspeaker.

Mount the phone as described in *2 Reassembly* (*page 4*), step 5-9 and 13-19.

Fig 2.1

Fig 2.2

Fig 2.3

3.9 Elastomeric connector

3.9.1 Process tools

- Tweezers.

3.9.2 Instructions

- Dismount the phone as described in *1 Disassembly* (*page 2*), step 1 and 5-13.

NOTE! Do not touch the display or contact surface with your fingers, use gloves!

1. Remove the old elastomeric-connector.
2. Take a new elastomeric-connector with a tweezers and place it in the holder. Press the connector into the hole with your finger (fig2.1).

- Mount the phone as described in *2 Reassembly* (*page 4*), step 5-9 and 13-19.

2.1

3.10 Vibrator assembly

WARNING! You are not allowed to remove the board from the frame on phones produced 99W41 and earlier, because of the strong over fill glue, which hold the circuit tight to the frame when removing the board. Send the phones to higher level.

3.10.1 Process tools

- Tweezers.

3.10.2 Instructions

- Dismount the phone as described in *1 Disassembly* (*page 2*), step 1 and 5-14.

1. Remove the vibrator-assembly with a tweezers by lifting it in the flywheel. If necessary, remove residue from the adhesive gasket. (fig2.1)

   NOTE! Be careful, do not damage the EMI-gasket on the frame.
2. Take a new vibrator-assembly and apply the adhesive gasket.
3. Mount the vibrator-assembly with the flat side up into the specific cavity in the frame.
4. Place the board on the frame and control that the vibrator connector board is correctly mounted with the cables pointed downward (fig2.2).
5. Mount a short screw over the vibrator connector and tighten it slowly with the torx screwdriver (fig2.3).
6. Break off the vibrator connector board.

- Mount the phone as described in *2 Reassembly* (*page 4*), step 4-9 and 13-19

Fig 2.1

Fig 2.2

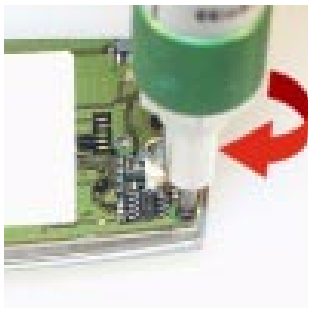


Fig 2.3

3.11 Antenna

3.11.1 Instructions

- No Disassembly or Reassembly.

1. Remove the antenna by slightly moving it side by side at the same time as pulling it out from the phone (fig2.1).
2. Take a new antenna. Place it in the antenna house and push until a click is heard

Fig 2.1

3.12 Plug

WARNING! You are not allowed to remove the board from the frame on phones produced 99W41 and earlier, because of the strong over fill glue, which hold the circuit tight to the frame when removing the board. Send the phones to higher level.

3.12.1 Process tools

- Tweezers.

3.12.2 Instructions

- Dismount the phone as described in *1 Disassembly* (*page 2*), step 1 and 5-14.

1. Remove the plug (fig2.1)

   NOTE! Be careful, do not damage the EMI-gasket on the frame.
2. Take a new plug.
3. Mount the plug into the specific cavity in the frame (fig2.2).

- Mount the phone as described in *2 Reassembly* (*page 4*), step 3-9 and 13-19

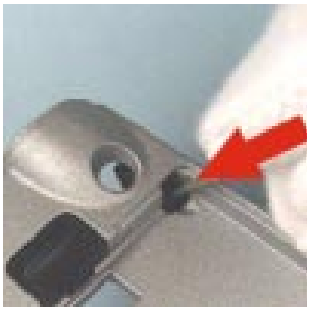


Fig 2.1

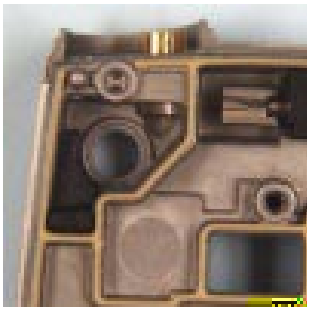


Fig 2.2

4 Warranty seal

4.1 Process tools

- Tweezers.

4.2 Instructions

1. Remove the antenna.
2. Mount the warranty seal in the antenna house according to fig 3.1 and fig 3.2.

   NOTE! It is important that the warranty seal is not to stretch or to slack mounted.
3. Mount the antenna.

Fig 3.1

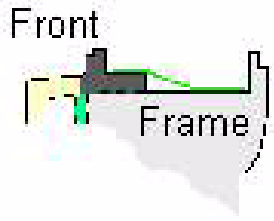
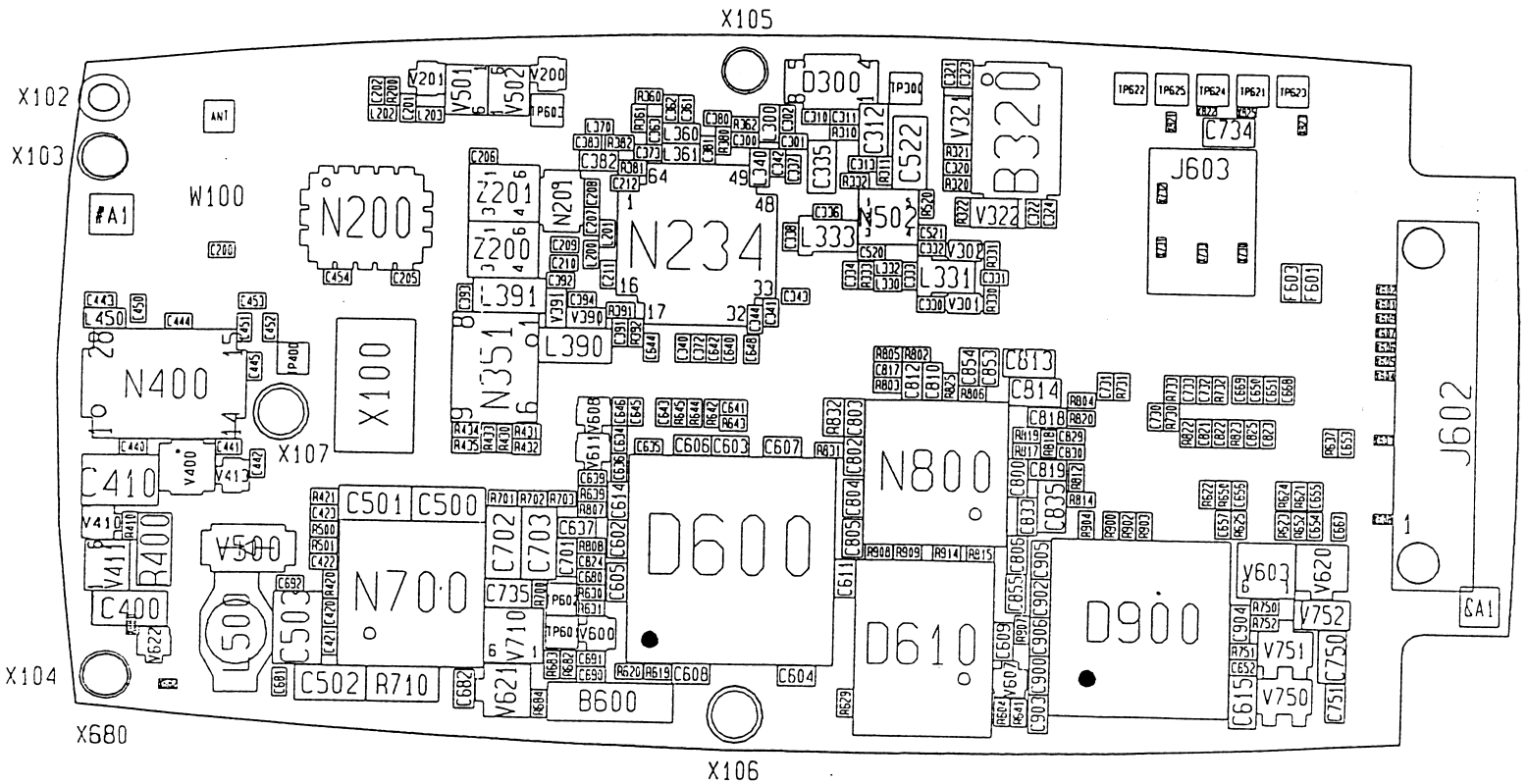


Fig 3.2

5 Revision History

Rev.	Date	Changes / Comments
A	1999-07-14	First release.
B	1999-08-04	Chapter 1.2, 2.2, 3.4.2 and 3.7.2 are updated.
C	1999-09-20	Chapter 1.2, 2.2, and 3.8.2 are updated.
D	1999-11-01	Convert from FrameMaker to Word and updated chapter 3.10, 3.12.



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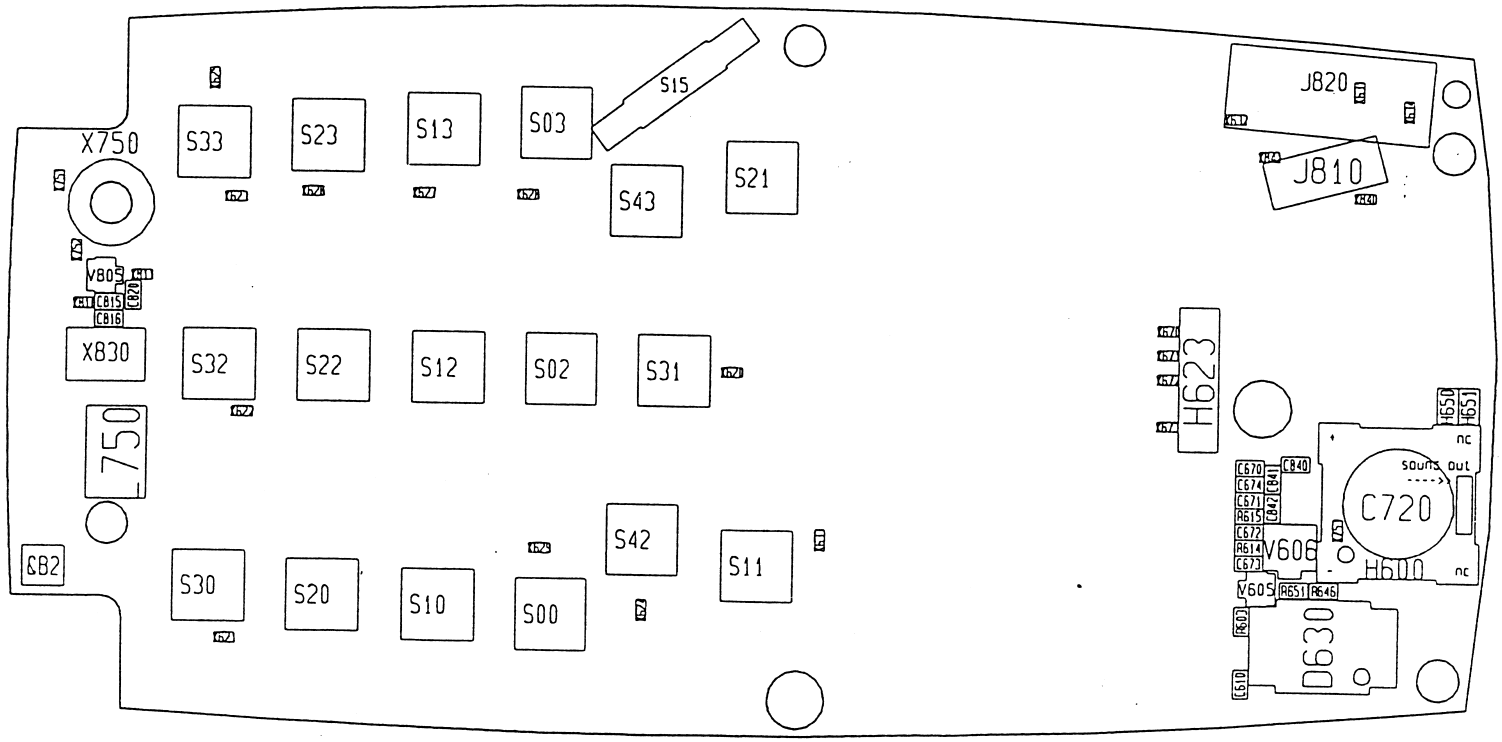
Referenser - References	Dokansv/Godk - Doc respons/Approved LD/ECS/TB/DDC	Datum - Date 1998-01-05 / Rev P1
	Produktbenämning - Product name Printed Circuit Board	

Primary side of Mainboard



Secondary side of Marianne1

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	Dokansv/Godk - Doc respons/Approved	Datum - Date / Rev
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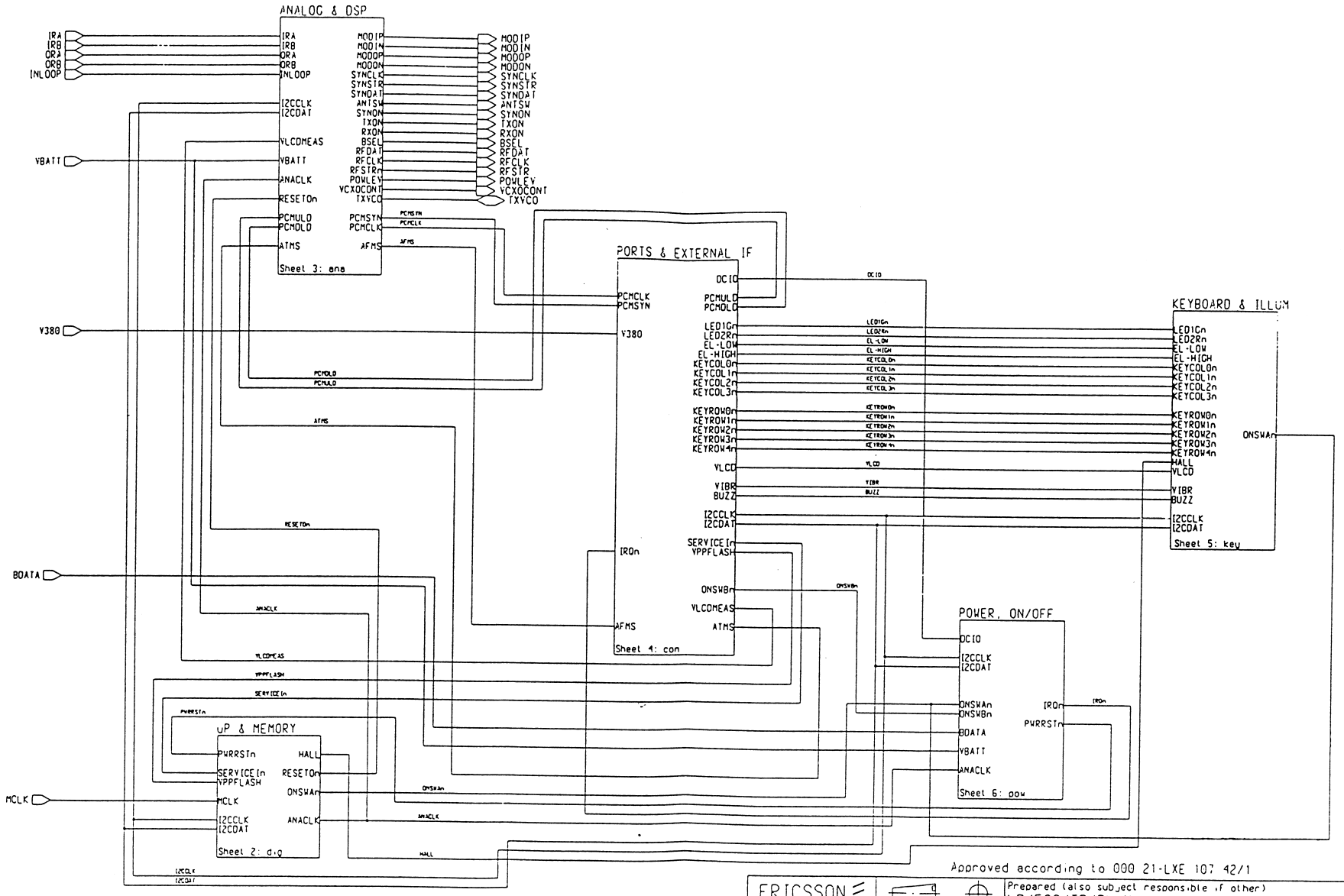
	Produktbenämning - Product name	
	Printed Circuit Board	
	Dokument - Document no	Sheet



Approved according to 000 21-LXE 107 42/1

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References: Logic; Block Schematic	Prepared (also subject responsible if other): LD/ECS/TB/PL Mats Larsson		
	Doc respons/Approved: TB/PLC (Bo Ekdahl)	Date: 98-11-09	Rev: A
	Product name: Marianne1		
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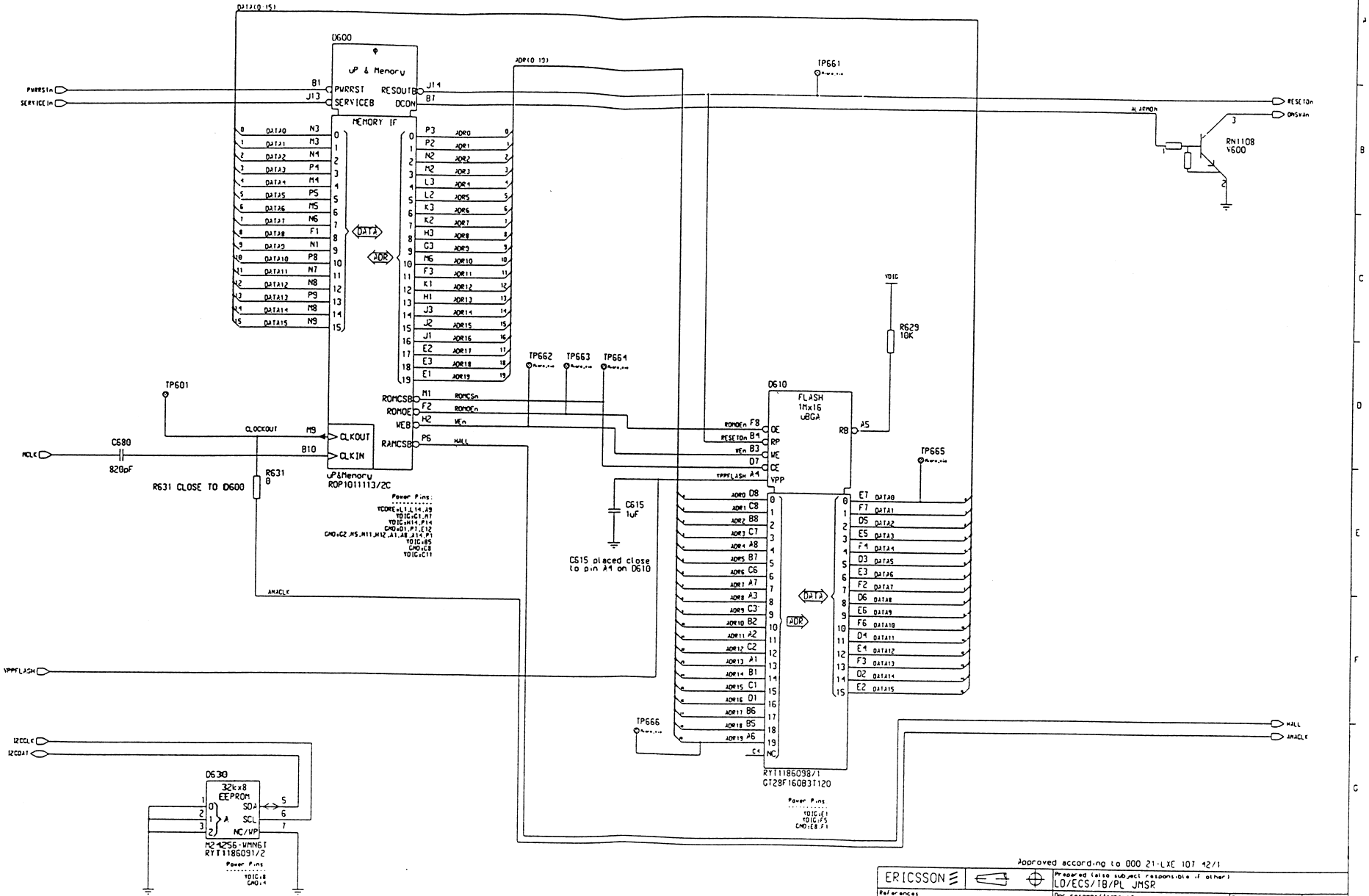
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PWRRST
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DCON
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RESETin
ONSWin
ALARMON
RN1108
V600
TP661
TP662
TP663
TP664
TP665
TP666
TP601
R629
10K
YDIG
D610
FLASH
1Mx16
uBGA
C680
820pF
R631
0
R631 CLOSE TO D600
CLOCKOUT
CLKOUT
CLKIN
uP&Memory
ROP1011113/2C
C615
1uF
C615 placed close
to pin A4 on D610
ROMCSB
ROMOE
WEB
RAMCSB
ROMCSn
ROMOEn
WEn
HALL
AMACLK
VPPFLASH
RESETIN
RB
RP
WE
CE
VPP
D7
IZCCLK
IZCDAT
D630
32kx8
EEPROM
SDA
SCL
NC/VP
M24256-VMN6T
RYT1186091/2
RYT1186098/1
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Power Pins:
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YDIG:F5
GND:E8,F1
YDIG:8
GND:4
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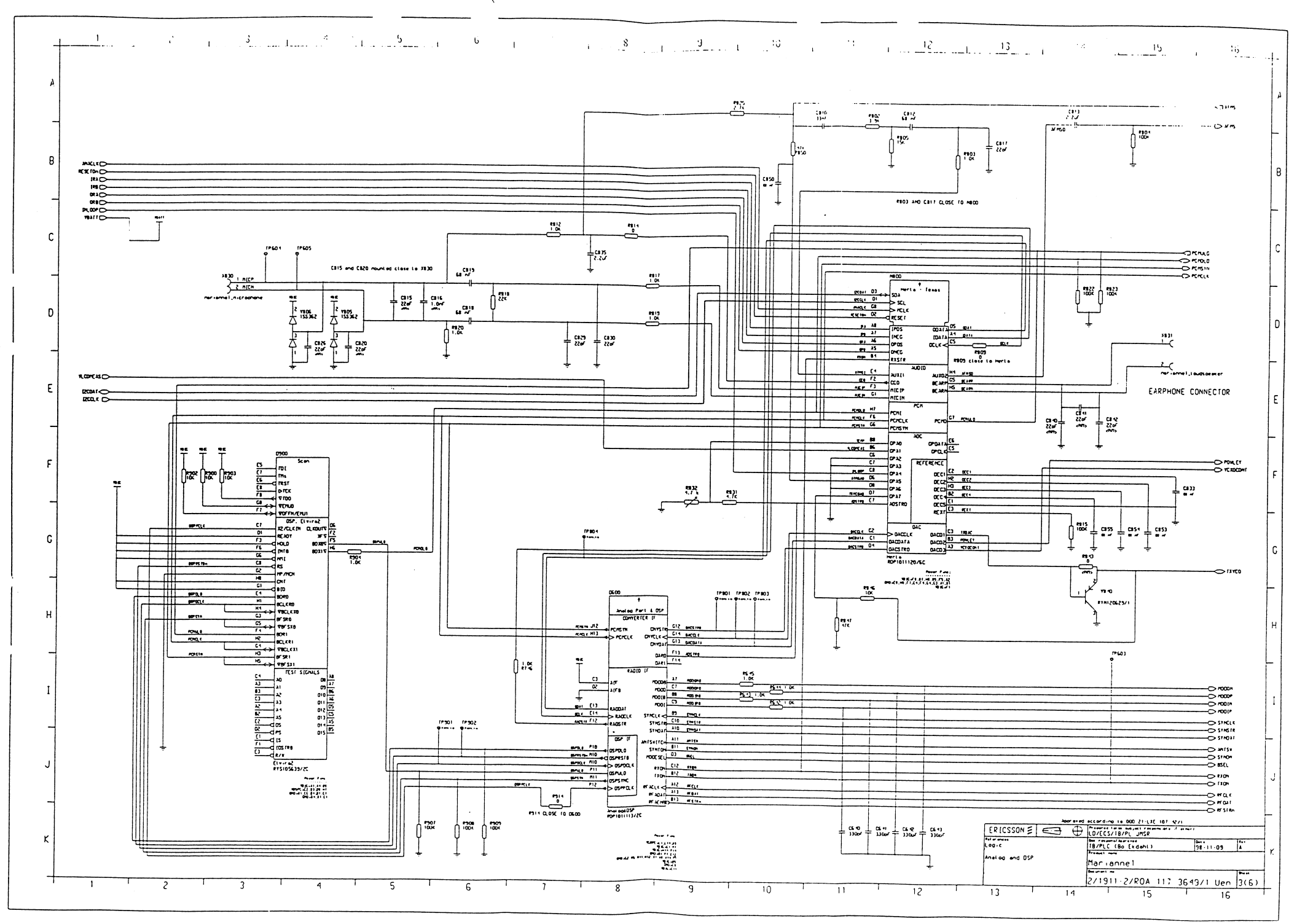
EARPHONE CONNECTOR
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C815 and C820 mounted close to X830
R905 close to Merlo
R914 CLOSE TO D600
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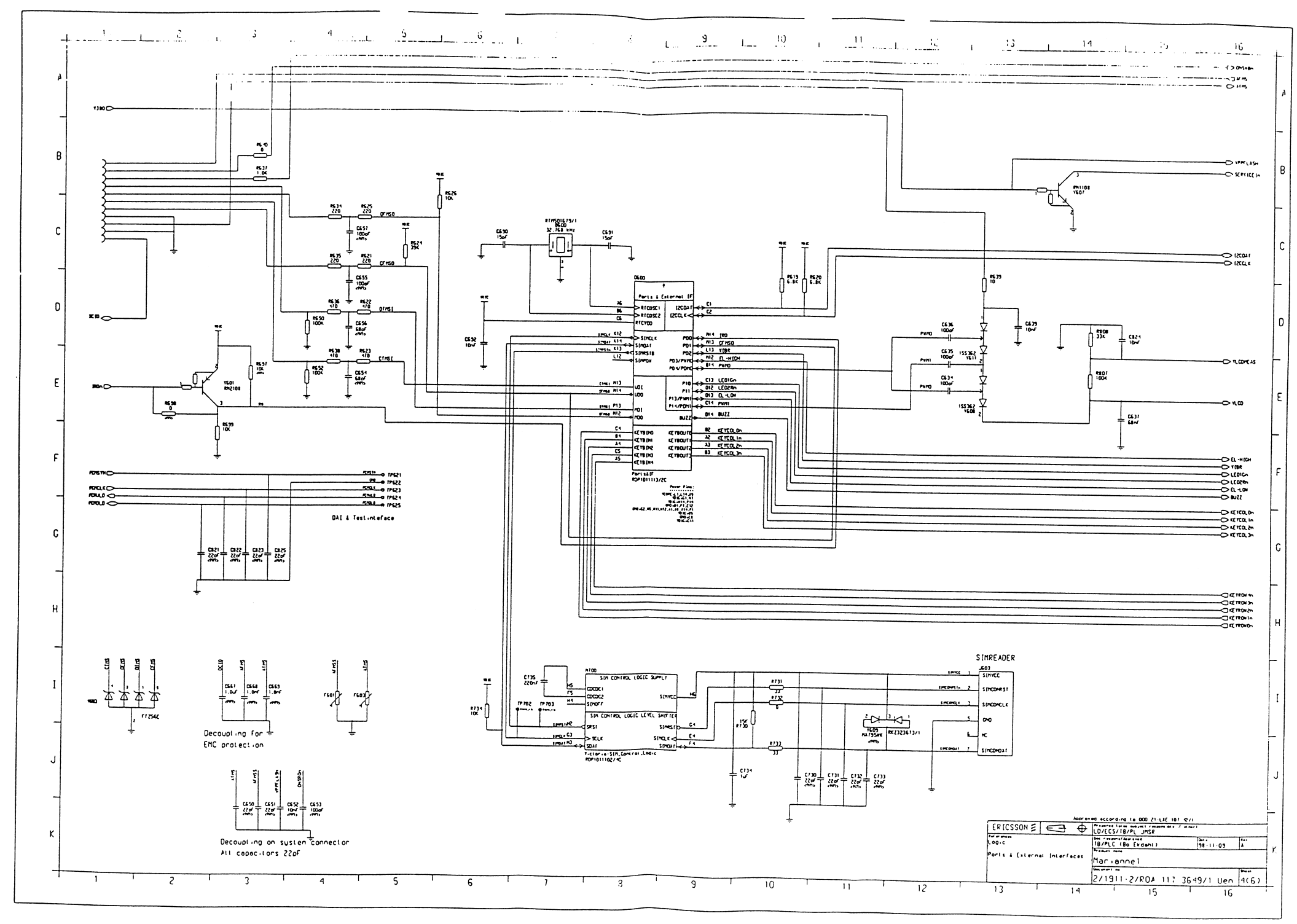
DSP, Elvira2
TEST SIGNALS
Elvira2
RYS1056J3/2C
Analog Part & DSP
CONVERTER IF
RADIO IF
DSP IF
Analog DSP
RDP1011113/2C
Merlo
RDP1011120/GC
RTM120625/1
ERICSSON
LO/ECS/TB/PL JMSR
TB/PLC (Bo Ekdahl)
98-11-09
Analog and DSP
Mar:annel
2/1911-2/ROA 117 3649/1 Uen
3(6)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Decoupling on system connector
All capacitors 22pF
SIMREADER
Logic
Ports & External Interfaces
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TB/PLC (Bo Ekdahl)
98-11-09
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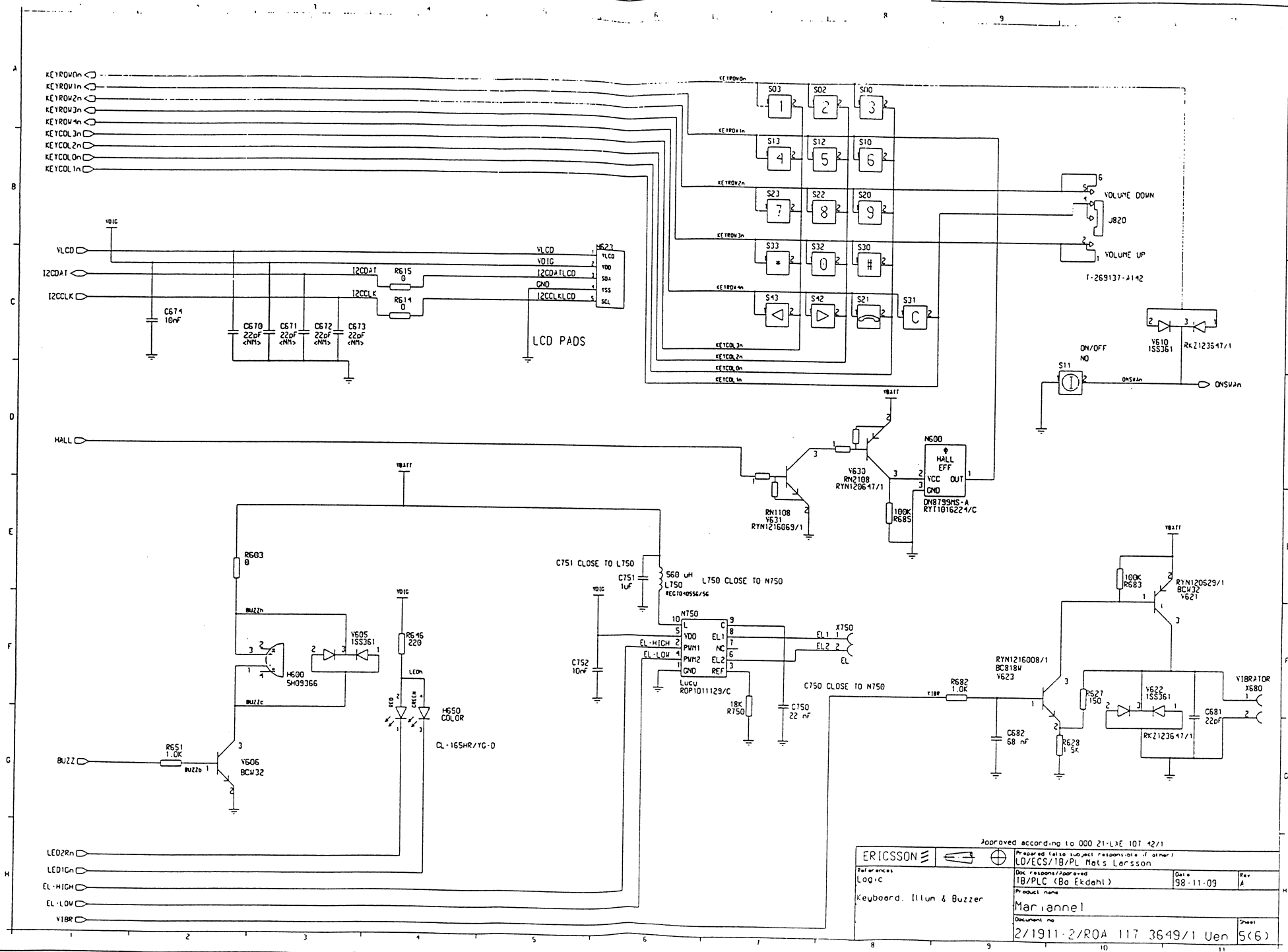
2/1911-2/ROA 117 3649/1 Uen
4(6)



Approved according to 000 21-LXE 107 42/1

ERICSSON

Prepared (also subject responsible if other)
LO/ECS/TB/PL Mats Larsson

References
Logic

Keyboard, Illum & Buzzer

Doc respons/Approved
TB/PLC (Bo Ekdahl)

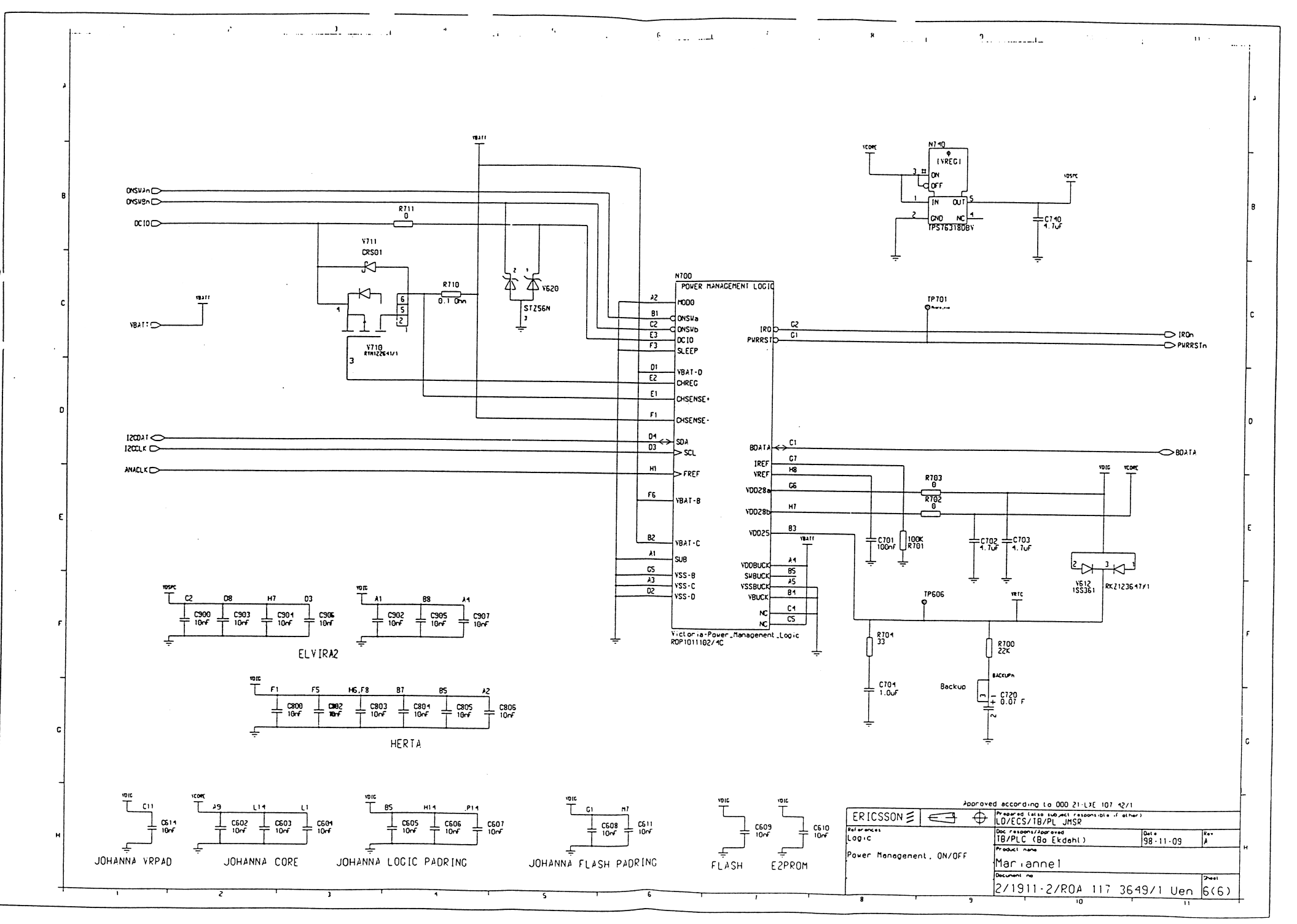
Date
98-11-09

Rev
A

Product name
Marianne1

Document no
2/1911-2/ROA 117 3649/1 Uen

Sheet
5(6)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VBATT
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POWER MANAGEMENT LOGIC
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C2 ONSWb
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F3 SLEEP
D1 VBAT-D
E2 CHREG
E1 CHSENSE+
F1 CHSENSE-
D4 SDA
D3 SCL
H1 FREF
F6 VBAT-B
B2 VBAT-C
A1 SUB
G5 VSS-B
A3 VSS-C
D2 VSS-D
I2CDAT
I2CCLK
ANACLK
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OFF
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OUT
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VCORE
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IRO
PWRRST
IROn
PWRRSTn
BDATA
BDATAn
IREF
VREF
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VDD28b
VDD25
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R702
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C701
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C702
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C703
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V612
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RKZ1236417/1
VDOBUCK
SWBUCK
VSSBUCK
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VRTC
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Backup
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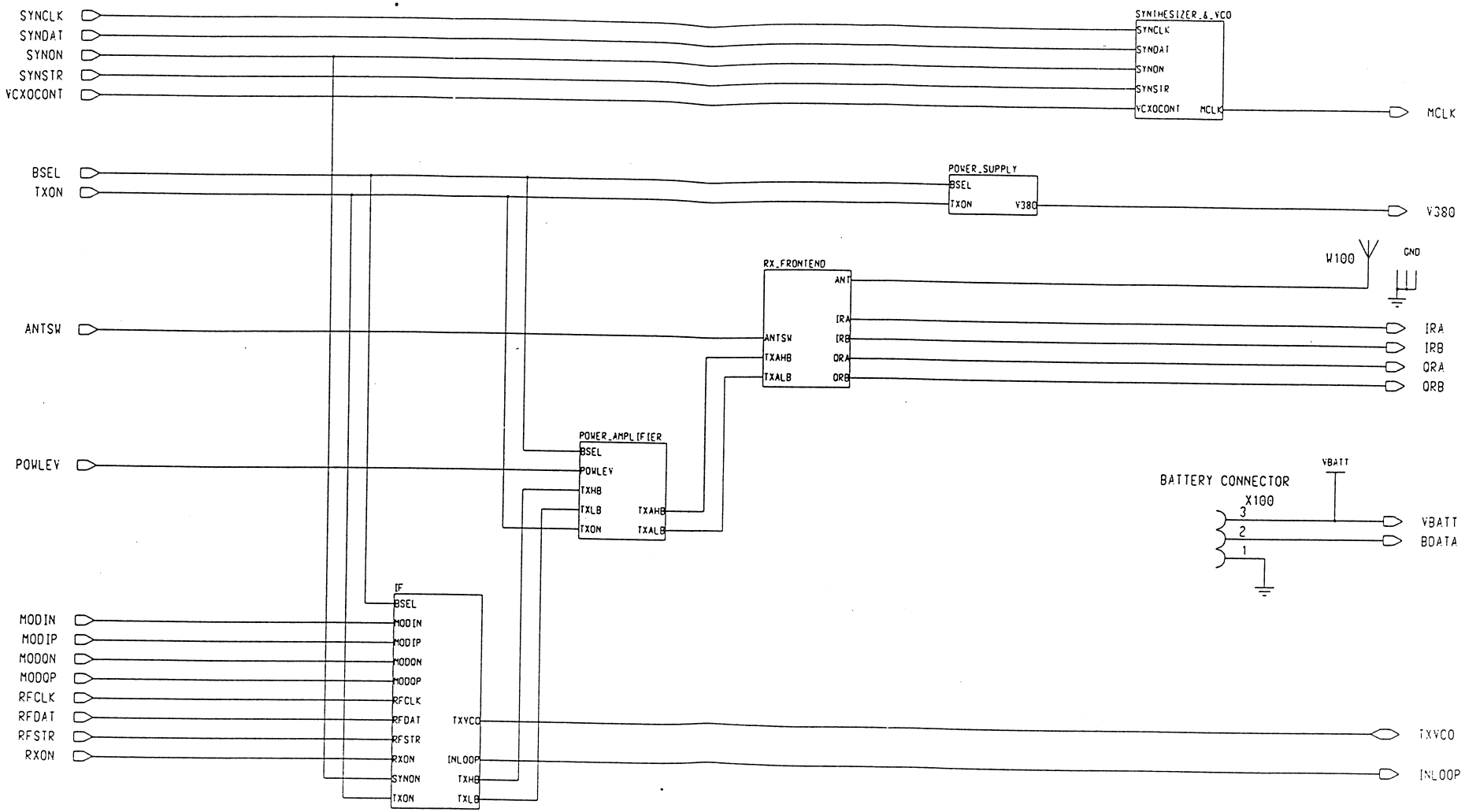
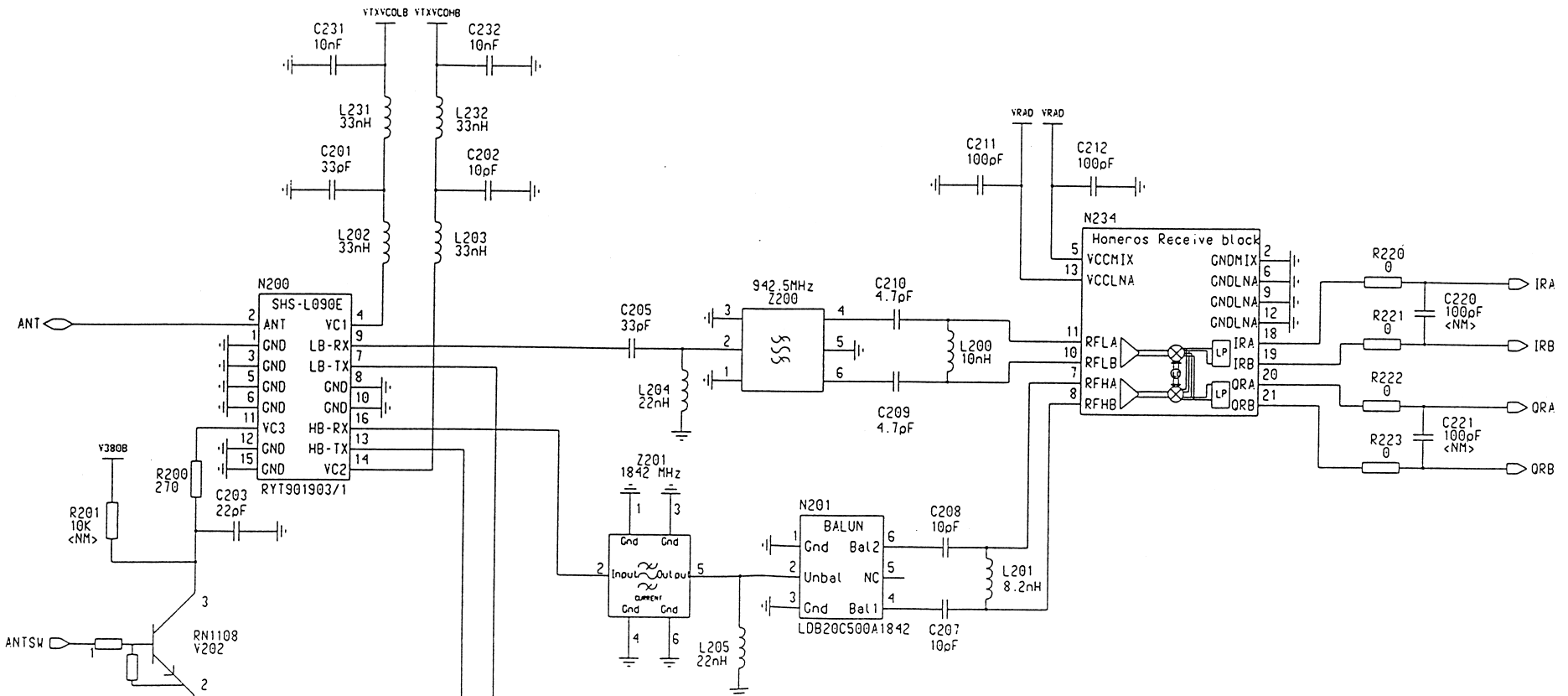
JOHANNA FLASH PADRING
C609 10nF
FLASH
C610 10nF
E2PROM
Approved according to 000 21-L3E 107 42/1
ERICSSON
Prepared (also subject responsible if other)
LD/ECS/TB/PL JMSR
References
Logic
Power Management, ON/OFF
Doc responsible/Approved
TB/PLC (Bo Ekdahl)
Date
98-11-09
Rev
A
Product name
Marianne1
Document no
2/1911-2/ROA 117 3649/1 Uen
Sheet
6(6)



Approved according to 000 21 - LXE 107 42/1

ERICSSON

References RADIO	Prepared (also subject responsible if other) LD/ECS/TB/PG Mathies Belin
BLOCK SCHEMATIC	Doc respons/Approved LD/ECS/TB/PGC Olof Zander Date 98-11-06 Rev A
	Product name MARIANNE
	Document no 1/1911-2/ROA 117 3649/1 Uen Sheet 1(6)



Approved according to 000 21 - LXE 107 42/1

ERICSSON

References: RADIO	Prepared (also subject responsible if other): LD/ECS/TB/PG Martin Pramheden & Ulrik Imberg
	Doc respons/Approved: LD/ECS/TB/PGC Olof Zander; Date: 98-11-06; Rev: A
RX FRONTEND	Product name: MARIANNE
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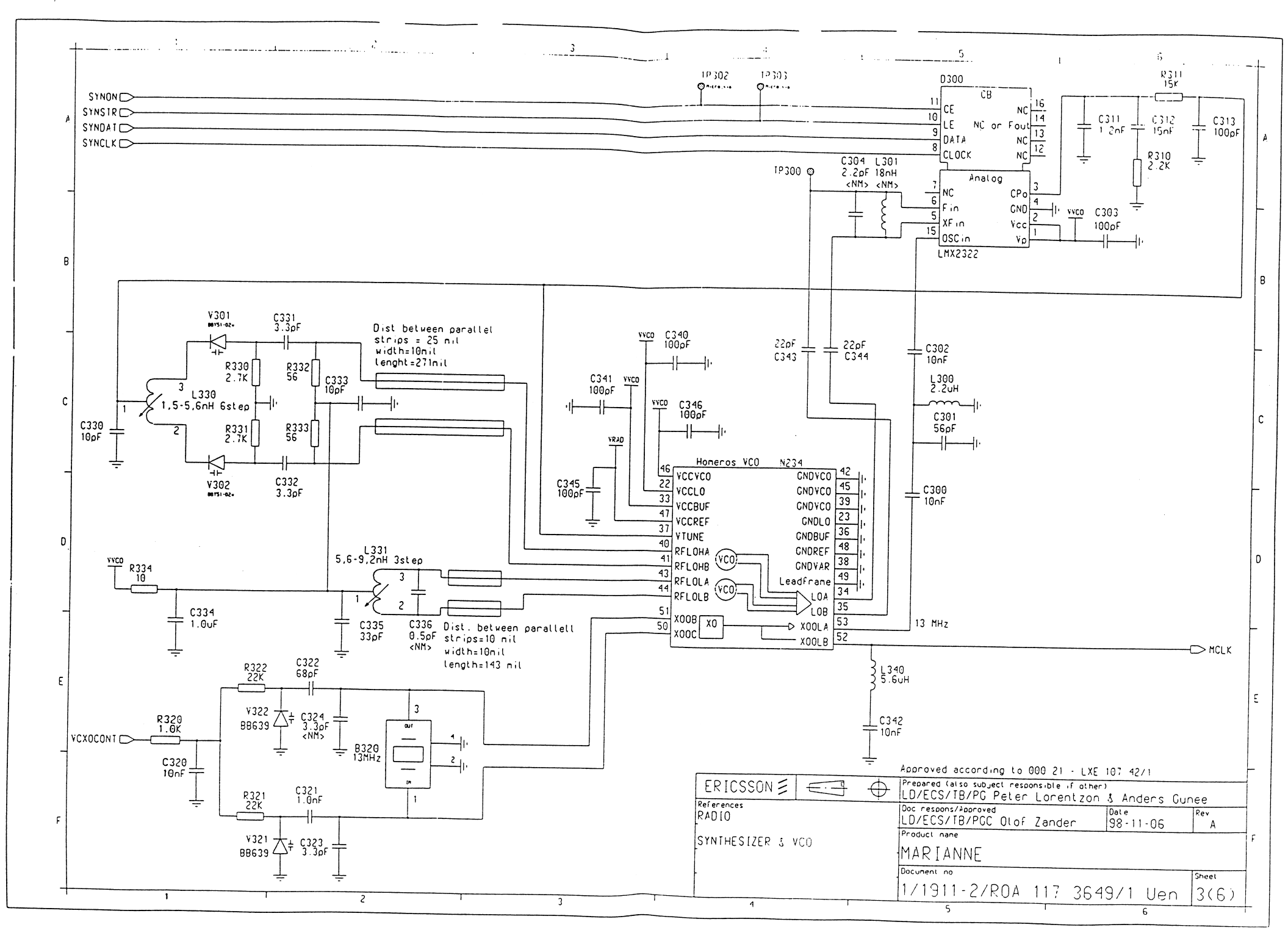
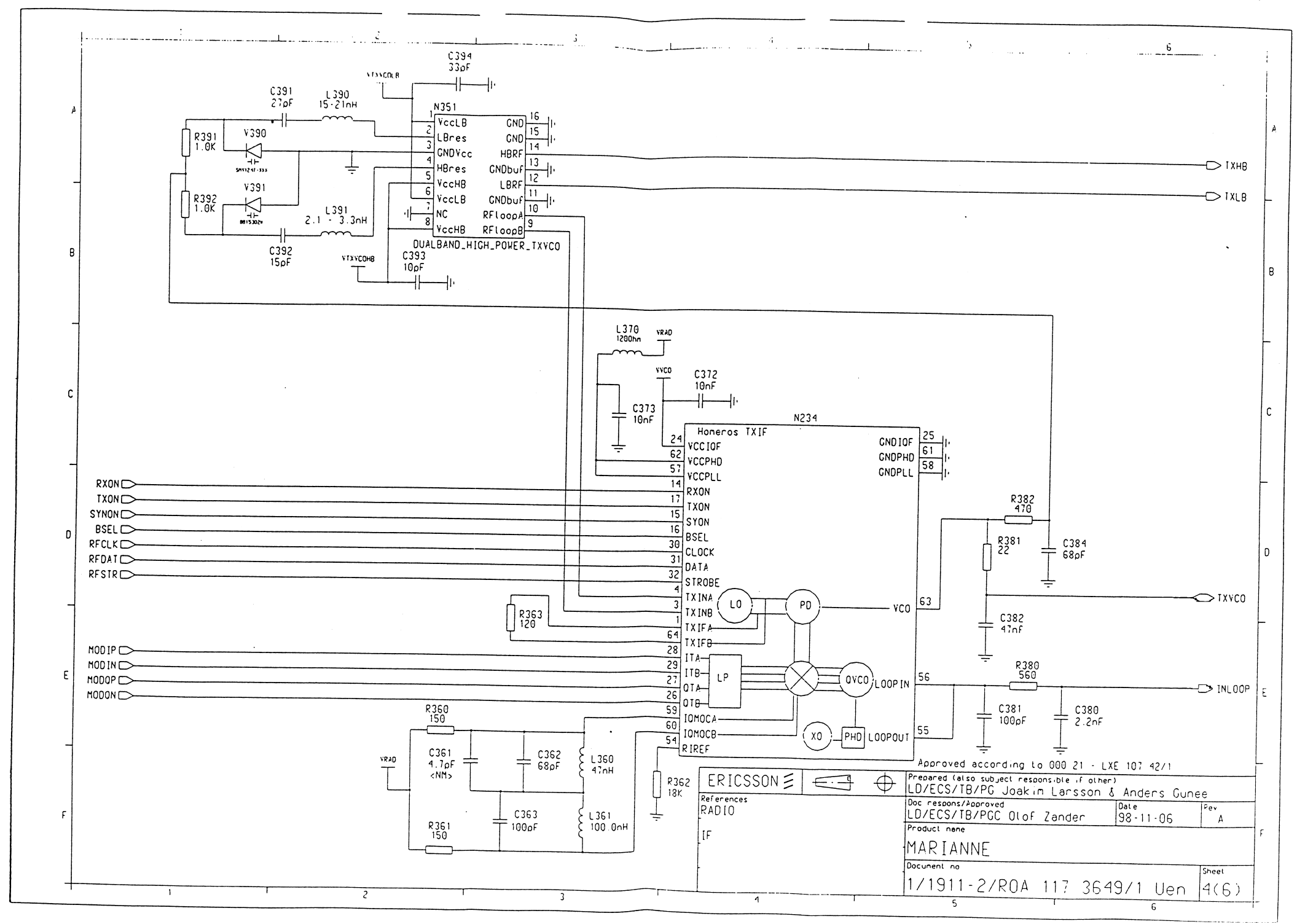


Approved according to 000 21 - LXE 107 42/1

ERICSSON

References	RADIO
	SYNTHESIZER & VCO
Prepared (also subject responsible if other)	LD/ECS/TB/PG Peter Lorentzon & Anders Gunee
Doc respons/Approved	LD/ECS/TB/PGC Olof Zander
Date	98-11-06
Rev	A
Product name	MARIANNE
Document no	1/1911-2/ROA 117 3649/1 Uen
Sheet	3(6)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2.1 - 3.3nH
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HBres
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VRAD
Approved according to 000 21 - LXE 107 42/1
ERICSSON
Prepared (also subject responsible if other)
LD/ECS/TB/PG Joakim Larsson & Anders Gunee
References
RADIO
IF
Doc respons/Approved
LD/ECS/TB/PGC Olof Zander
Date
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Rev
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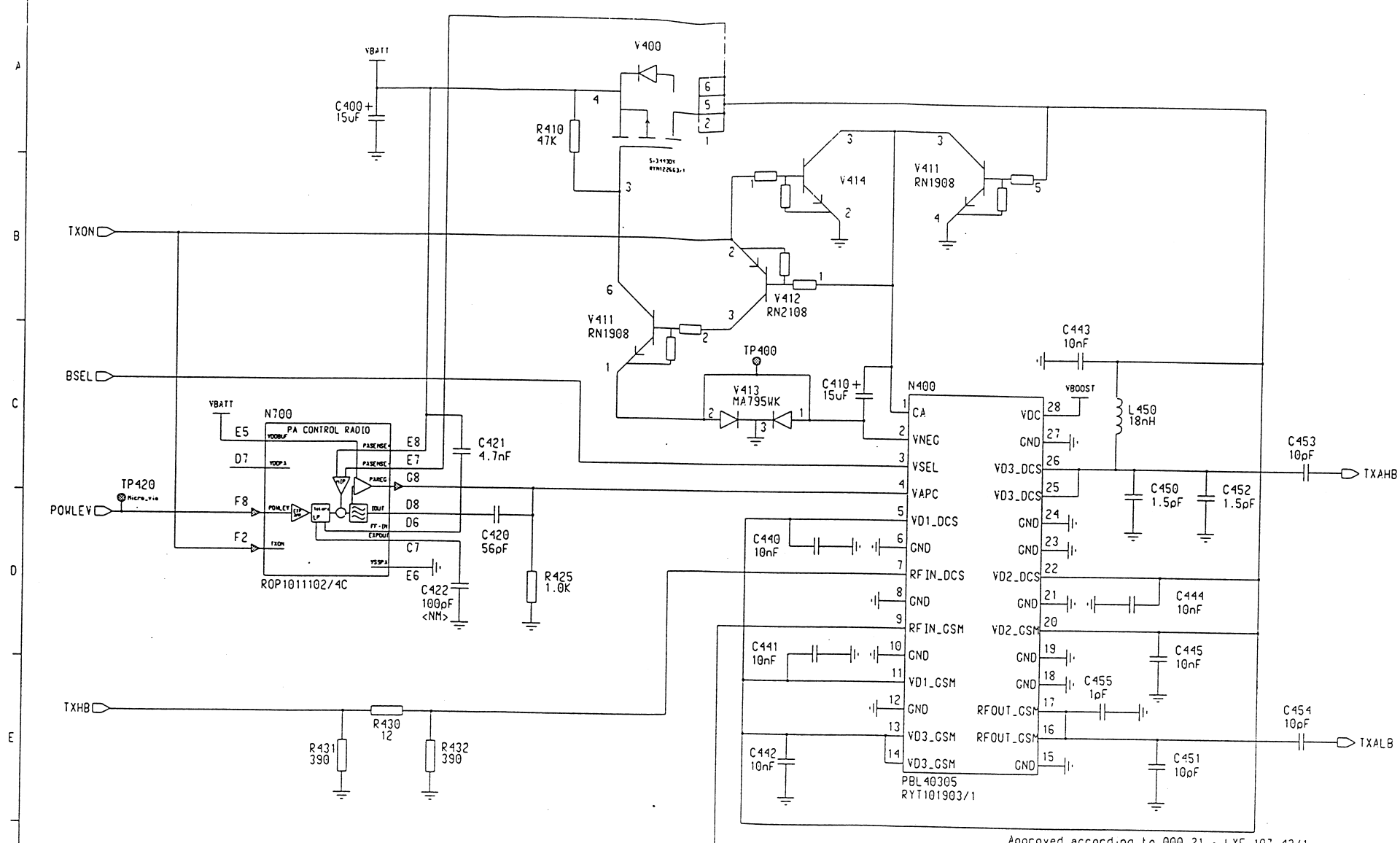
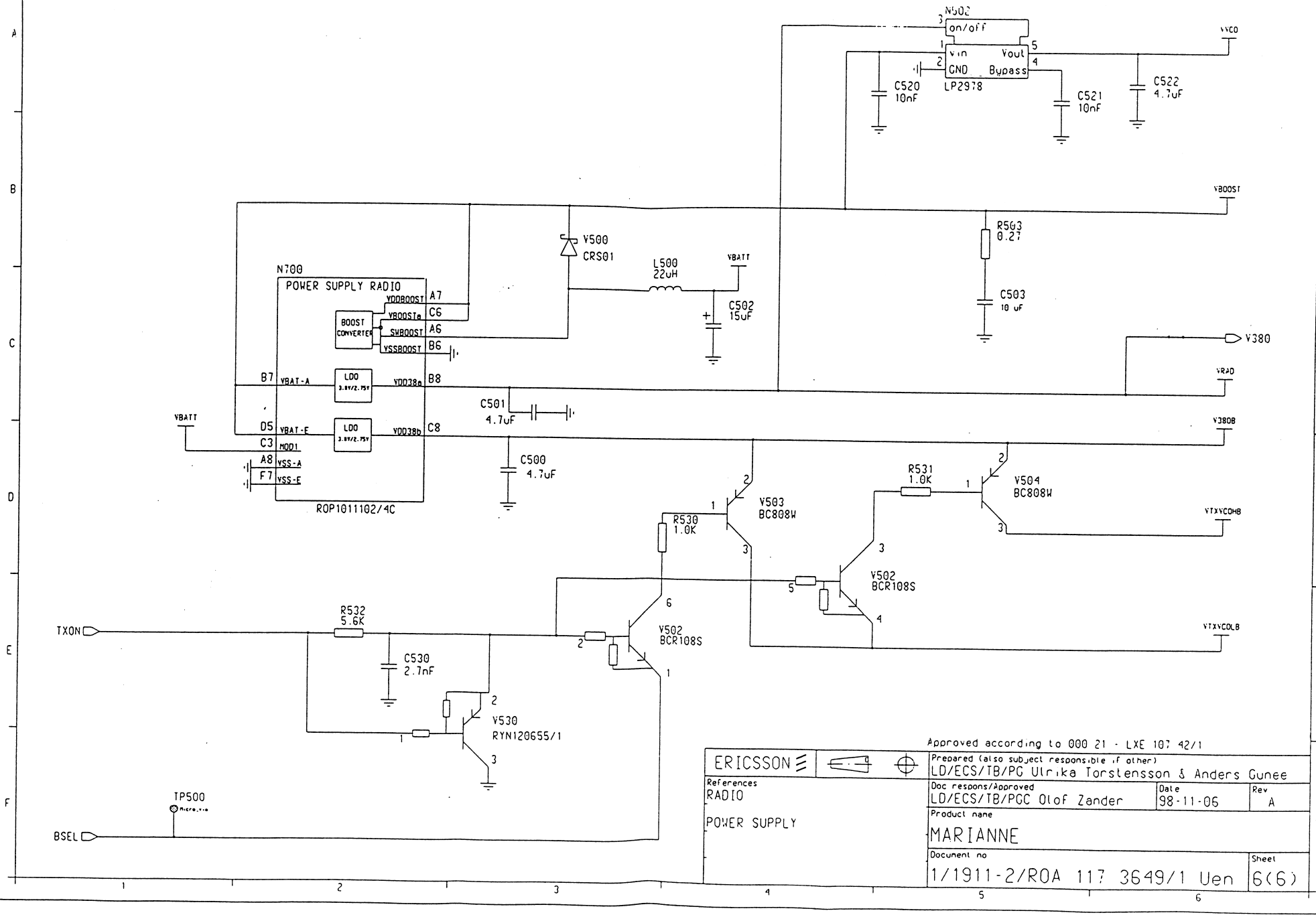
Document no
1/1911-2/ROA 117 3649/1 Uen
Sheet
4(6)



Approved according to 000 21 - LXE 107 42/1

ERICSSON

References: RADIO	Prepared (also subject responsible if other): LD/ECS/TB/PG Ulrik Imberg
POWER AMPLIFIER	Doc respons/Approved: LD/ECS/TB/PGC Olof Zander; Date: 98-11-06; Rev: A
	Product name: MARIANNE
	Document no: 1/1911-2/ROA 117 3649/1 Uen; Sheet: 5(6)



Approved according to 000 21 - LXE 107 42/1

ERICSSON	Prepared (also subject responsible if other): LD/ECS/TB/PG Ulrika Torstensson & Anders Gunee
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POWER SUPPLY	Product name: MARIANNE
	Document no: 1/1911-2/ROA 117 3649/1 Uen; Sheet: 6(6)

Scrap process, general description all levels

1 Abstract

The description intend to clarify why units not fulfilling repair demands, is not accepted in warranty or in normal repair process.

Service Centres not certified to scrap Ericsson products are recommended to send the unit to assigned address according to Local Company directive.

Please note that only centres certified for the scrap process can execute the physical scrap.

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2 General process

To be able to understand when to scrap it is necessary to explain where in the repair process SCRAP occurs. Below is a short simplified overview of the basic repair process and where the Scrap-process fit in.

Basically three scenarios occur; see below (2.1, 2.2, 2.3)

2.1 In warranty repairs

The customer has not voided the warranty and the unit is in warranty time frame. In this process a customer will not encounter demands for any cost for the repair. In this case a scrap cause can occur in the following cases.

- Moist *(see 3.3)*
- Not supported part *(see 3.2)*
- Non-repairable Sim-lock problem *(see 3.2)*
- Epidemically failure *(see 3.3)*
- Repair failed *(see 3.3)*
- Missing PBA label *(see 3.3)*

2.2 Out of warranty repairs (but still in warranty time period)

The customer has voided the warranty but the unit is still considered repairable. In this process the customer will always be charged for the repair cost. This is applicable when it is a minor misuse. An example is minor mechanical damaged, i.e. NO damages on the circuit board, e.g. cracks.

A typical example of this is if a customer has broken for instance the flip by impermissible violence, i.e. still a misuse but still repairable

The fundamental rule for performing these kind of repairs is that the certified repair centre MUST be able to ensure high quality of the repair. If the certified service centre can not ensure high quality repair it shall be rejected *(see 2.3).*

The customer shall always be informed before carry out repairs that will cost him money. The customers of course have the choice not to repair it.

2.3 Rejected repair

The customer has voided the warranty and the unit is considered non-repairable. In this case the customer will never be offered any repairs but can in some cases be offered a subsidised exchange unit, this is a local and regional decision. On all repairs performed by a certified service centre we must be able to guarantee high quality repairs.

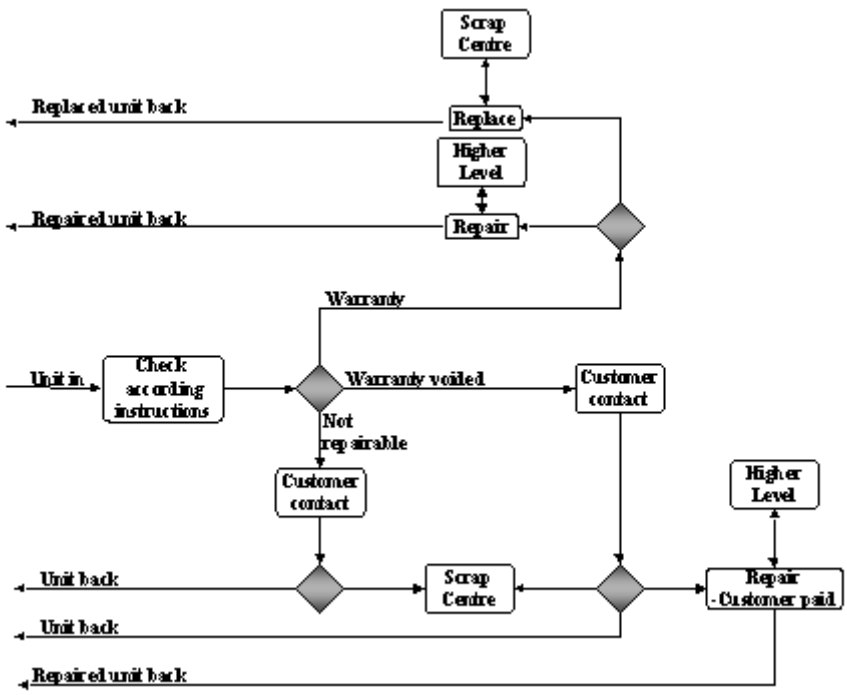
In this case it will always result in that the unit is rejected for repair.

Below are the cases when the unit shall be rejected and considered non-repairable:

- Water/liquid damaged *(see 3.1)*
- Major Mechanical damaged *(see 3.1)*
- Warranty seal broken *(see 3.1)*
- Unauthorised repair *(see 3.1)*
- Tampered *(see 3.1)*
- Missing or unreadable type label *(see 3.3)*
- IMEI-mismatch *(see 3.3)*

As shown in the process flow below the customer has the choice to have the unit back or not. If the customer does not want it back the units shall be sent to a centre that is approved for the physical scrap according Local Company directive.

2.4 General process flow



3 Terms of reference

3.1 Misuse

The warranty will not be valid for units that have been exposed to wrong handling, injury, wrong installation, non authorised repair, alteration, modifying, trimming or other handling that are not in accordance with handling instruction. If some of these cases will occur, the customer is responsible and will be charged for the cost of any possible repairs.

Some causes of misuse will result in that the unit is non-repairable. All repairs performed by a certified centre shall fulfil Ericsson quality demands, this means if a certified service centre can not guarantee the quality of the repair the centre shall not repair it.

Cases of misuse:

- Water/Liquid damage
- Major mechanical damage
- Warranty seal broken
- Unauthorised repairs
- Tampered

See 4.1 for definitions

3.2 Reoair concept limitations

Only applicable on advanced centre

Cases of repair concept limitations:

- Not Supported part
- Non-repairable Sim-lock problem

See 4.2 for definitions

3.3 Other

Those reasons to scrap not applicable to misuse or repair concept limitations are stated as other, but still a possible scrap cause.

Cases for other:

- Missing or damaged labels
- IMEI-mismatch
- Moist
- Repair failed
- Epidemically failure

See 4.3 for definitions

4 Definitions

4.1 Misuse

4.1.1 Water / Liquid damage

If a unit is exposed to water or other liquid the warranty will not be valid. The exposed area can appear as lime deposits on the P(rinted) B(oard) A(ssembly) or as corrosion on the components. Common problems after the unit has been exposed to water are, e.g. shut of problem, not able to switch on, display problems, etc.

A water damage often results in stains or corrosion on a large area while moist only cause damage on a minor area.

A water/ liquid damaged on a big area shall always be rejected for repair. *(See 2.3)*

4.1.2 Mechanical damage

If the end user have dropped the unit or in other way exposed it for unnatural use the warranty will not be valid. If the PBA have been damaged in that way that it can not be repaired ,e.g. a cracked PBA, the unit shall be rejected for repair*(See 2.3)*. The customer can in some cases be offered a subsidised exchange unit, this is a local and regional decision.

4.1.3 Warranty seal broken

The seal will warn the user not to open the unit. The warranty seal is only allowed to be broken at certified service centres A certified service centre shall always place a new warranty seal on if the old one has been broken.

If the warranty seal is broken it is possible that the unit has an ESD (Electro Static Discharge) damage. Because this problem are very hard to determine the unit shall always be rejected for repair. The customer will never be offered repair, in or out of warranty, if he/she has broken the warranty seal. The main reason for that it shall not be repaired is that the CSC can not guarantee the quality of the repair. The unit shall be rejected for repair. *(See 2.3)*

Only in the cases there it is a direct customer entry and the warranty seal is broken the unit shall be rejected. The unit shall not be rejected if the warranty seal is missing when the unit arrives to a higher level certified service centre from a lower level certified service centre.

4.1.4 Unauthorised repair

If an unauthorised person have repaired the unit the warranty will no longer be valid. This can be seen as parts used other than Ericsson original, bad soldering, wrong parts and broken warranty seal. The customer shall never be offered repair, in or out of warranty, if he/she has performed an unauthorised repair. The unit shall be rejected for repair. *(See 2.3)*

4.1.5 Tampered

This cause is only valid for some products, information of which will be distributed separately on CSPN.

If an unauthorised person tamper with the IMEI or SIM-lock number in the unit it is possible that all information in the eeprom memory will be erased. After tampering with these areas the unit will be useless and “tampered” will appear in the display. Tampering with these areas are prohibited.

When tampered appear in the display the unit shall be rejected for repair *(See 2.3)*. The customer will not be compensated.

4.2 Repair concept limitations

4.2.1 Not supported part

This scrap cause is applicable only at the highest level of repair and when we have chosen not support the spare part.

4.2.2 Sim-lock

Only applicable for advanced centre

4.3 Other

4.3.1 Missing label

4.3.1.1 Type Label

All received units without the original Ericsson type label shall be rejected for repair. *Please notify your local company if this occurs.*

Units with damaged type labels are recreated if possible otherwise the unit shall be rejected for repair.

4.3.1.2 PBA Label

a) Mechanical repair

To conduct a mechanical repair it is not crucial to identify the product number or the Revision State of the PBA. Therefore the repair can be conducted.

b) Electrical repair (Swap)

If an electrical repair is to take place it is of importance to be able to identify the product number and the Revision State. Otherwise there is an obvious risk to fail with the repair action taken. If there is a hesitation about identification of the product number or Revision State of the PBA it can be necessary to scrap it. These cases are mainly applicable at the advanced level.

4.3.2 IMEI mis match

If the IMEI number stated on the label does not match the IMEI stored in the mobile unit, the unit shall be scrapped.

The customer will not be compensated. The unit shall be rejected for repair. *(See 2.3). Please notify your local company if this occurs.*

4.3.3 Moist

If there is trace of moist at the Printed Board Assembly (PBA) the Service Centre are recommended to decide upon if the customer shall have a replacement. Moist damaged is equal to warranty repair.

See pictures below for judgement regarding liquid versus moist damage

4.3.4 Repair failed

If a service centre cause a failure in their own repair flow the customer shall be offered an exchange unit and the centre must take the cost.

Following cases of repair failed exists:

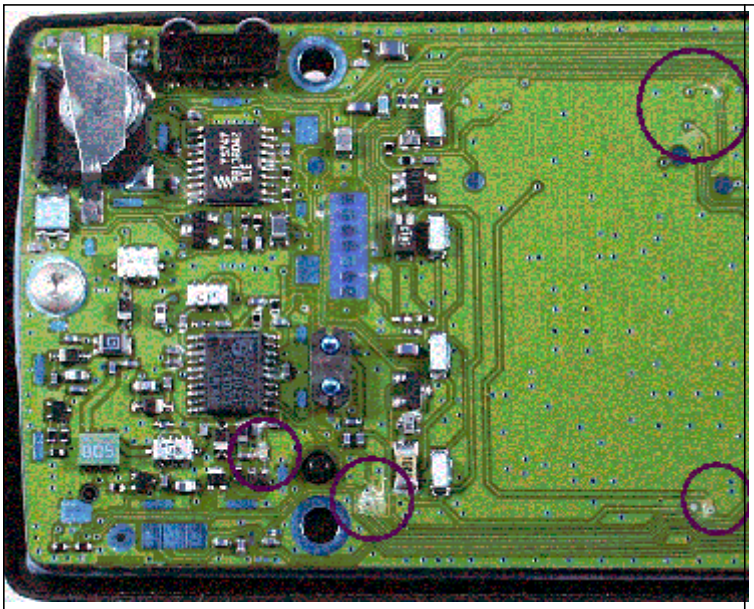
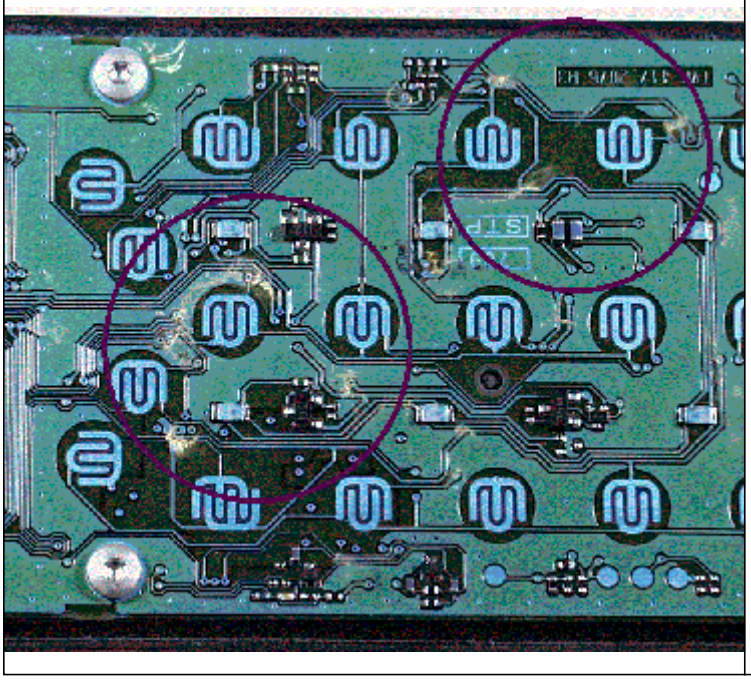
- The service centre damages the unit beyond reparability.

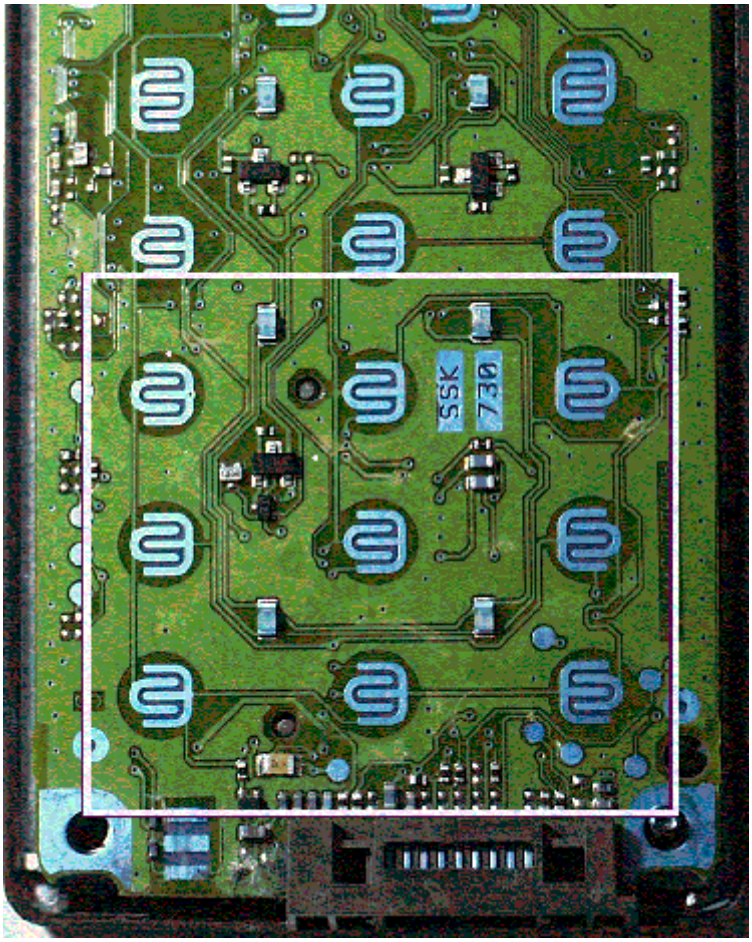
4.3.5 Epidemically failure

In some cases a serious constructional defect will cause that we chose to scrap a whole unit instead of repair it.

This cause of scrap is product related and instructions of what should be scrapped will be provided for each product. This information shall be clearly stated on CSPN.

5 Instructions for judgements

	Here we can see awater damaged PBA. The lime deposits are congregated around the Via holes. In this case the warrenty will no longer be valid. The unit shall be rejected for repair (*See 2.3*) Referring to 4.1.1.
	This water damage is in a very large area. This has certainly resulted in a short circuit and the phone has become dead. Neither in this case the warrenty will be valid. The unit shall be rejected for reppair. (*See 2.3*) Referring to 4.1.1.



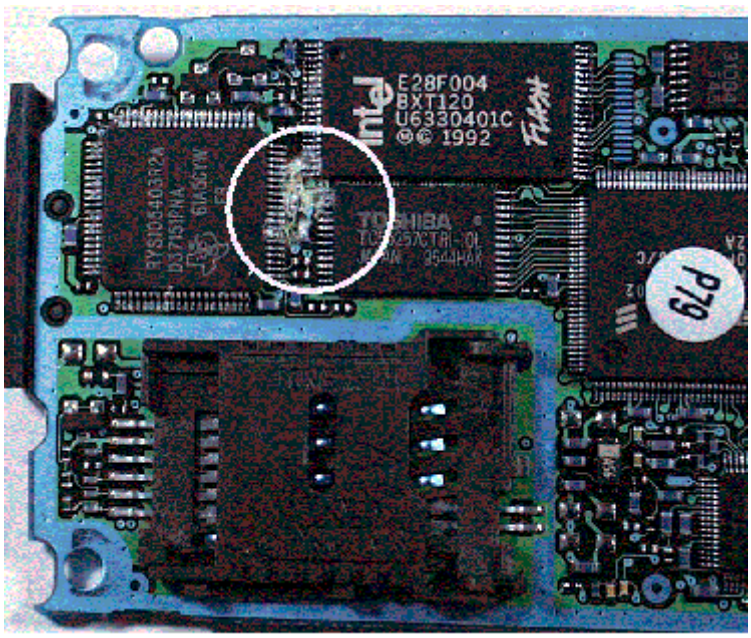
In this case the water damage is in a large area even though the amount of wate is not so much.

This has certainly resulted in bad connection with the keyboard. The customer has probably been forced to press very hard on some buttons or they have not been functioned.

Nethier in this case the warrenty will be valid.

The unit shall be rejected for repair. (*See 2.3*)

Referring to 4.1.1.

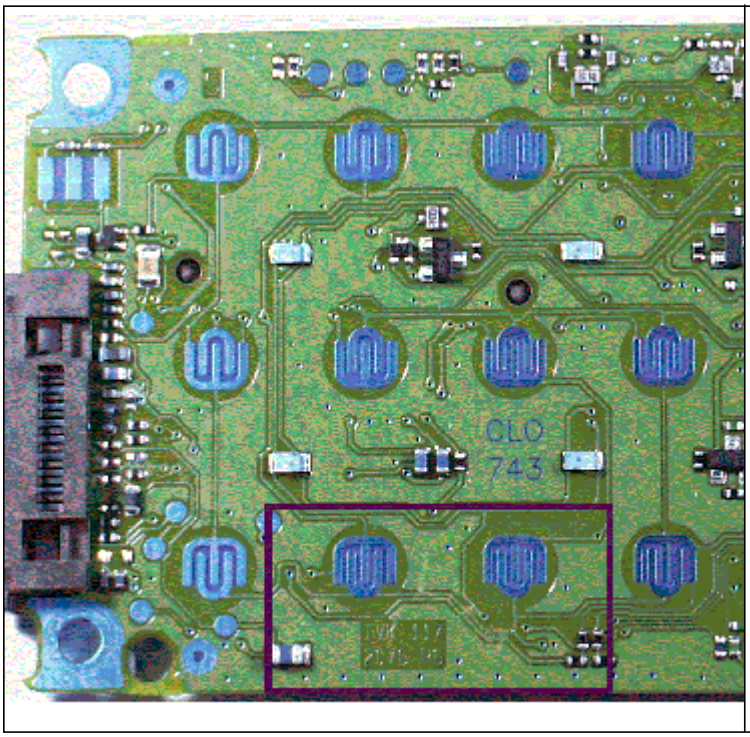


This is an example of corrosion on the circuit pins. It needs a lot of water to start a process like this.

Neither in this case the warrenty will be valid.

The unit shall be rejected for repair. (*See 2.3*)

Referring to 4.1.1.



This is an example of a PBA that have been exposed to moist. There are very little lime deposits and in a small area.

In this case the unit must be scrapped and the customer shall be replaced for the old unit (within the warranty period).

Referring to 4.3.3.